

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/398,276 09/20/99 BAUGH

B

PM82/1206

BENTON F BAUGH  
14626 OAK BEND  
HOUSTON TX 77079-6441

EXAMINER

MAYO, T

ART UNIT

PAPER NUMBER

3673

DATE MAILED: 12/06/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

**Office Action Summary**

Application No. 09/398,276	Applicant(s) BAUGH, Benton F.
Examiner Tara L. Mayo	Group Art Unit 3673

Responsive to communication(s) filed on \_\_\_\_\_.

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

**Disposition of Claims**

Claim(s) 1-38 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1-32 is/are rejected.

Claim(s) 33-38 is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

**Application Papers**

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 3673

## **DETAILED ACTION**

1. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 3673.

### ***Claim Objections***

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 25 through 39 have been renumbered as claims 24 through 38.

3. Claims 1 through 4, 7, 9, 10, 13, 16, 17, 20, and 30 are objected to because of the following informalities: minor grammatical errors; claim drafting errors; and potential rejections under 35 U.S.C. §112, second paragraph.

In claim 1 at line 1, delete “The” and insert therefor --A--. Repeat the correction for claims 7, 13, and 20.

In claim 1 at line 6, delete “engage” and insert therefor --engaging--.

Art Unit: 3673

In claim 2 at line 1, delete "method" and insert therefor --step--. Repeat the correction for both claims 3 and 4.

In claim 2 at line 2, delete "is by" and insert therefor --includes-- or make an equivalent correction. Repeat the correction for claim 3 and 4.

In claim 9 at lines 1 through 2, delete "flowing said fluid across." Repeat the correction for claim 16.

In claim 10, delete "by mixing of chemicals" and insert therefor --chemical--, --a chemical mixture-- or make an equivalent change thereto. Repeat the correction for claim 17.

In claim 29 at line 1, delete "of" (second occurrence) and insert therefor --comprises-- or make an equivalent change thereto.

Appropriate correction is required.

*Claim Rejections - 35 U.S.C. § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1 through 28, 30, and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 3673

Regarding claims 1, 7, 13, 14, 21, 30, and 31, the phrase "or the such like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the such like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim 1 recites the limitation "the circulating pumps" on line 12. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the means to sealingly engage" on line 1. There is insufficient antecedent basis for this limitation in the claim.

With respect to claim 20, the scope of the claimed invention is rendered indefinite by the recitation of "intermediate fluid" as it is unclear to what Applicant is referring.

***Claim Rejections - 35 U.S.C. § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7 through 9, 13 through 16, 20 through 25, and 29 through 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jee (U.S. Patent No. 4,679,598).

Art Unit: 3673

Jee '598 discloses a method of removing hydrates from the inside of a subsea pipeline (4), the method comprising the step of:

repeatedly circulating water (col. 1, lines 59-60) through a circulation chamber (1) alternately over a portion of the outer surface of said pipeline and over heating means (col. 2, lines 36-38) to cause the hydrates to melt into liquids and/or gases within said subsea pipeline; or

converting energy into heat in an intermediate fluid below sea level and adjacent to said subsea pipeline (col. 1, lines 61-64); or

placing a circulation chamber adjacent to said pipeline and circulating heated fluid on a portion of the surface of said pipeline.

Jee '598 discloses all of the steps and features of the claimed invention with the exceptions of:

- a. seawater;
- b. heating means comprising electricity;
- c. heating means comprising pressure reducing means; and
- d. having a remote vehicle place a circulation chamber adjacent to the pipeline.

Art Unit: 3673

As Jee '598 expressly teaches the use of water (col. 1, lines 59-60), it would have been obvious to one of ordinary skill in the art of pipes at the time of invention to use seawater. The motivation would have been to facilitate the use of a readily available fluid.

With respect to claims 8, 15, and 24, it would have been obvious to one of ordinary skill in the art of heating at the time of invention to use electrical heating means. The motivation would have been to use a common form of energy to heat the water.

With respect to claims 9, 16, and 25, it would have been obvious to one of ordinary skill in the art of heating at the time of invention to use pressure reducing means. The motivation would have been to include a clean form of energy for heating the water.

With respect to claim 13, it would have been obvious to one of ordinary skill in the art of pipeline laying/manipulation at the time of invention to use a remote vehicle to place the circulation chamber adjacent to the pipeline. The motivation would have been to eliminate the need for divers.

With respect to claim 29, Applicant's recitation of a buried pipeline is considered to be anticipated by the teachings of Jee '589 as the disclosed method is capable of being performed on a buried subsea pipeline.

8. Claims 10, 17, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jee (U.S. Patent No. 4,679,598) in view of Khalil et al. (U.S. Patent No. 6,035,933).

Art Unit: 3673

Jee '598 discloses all of the steps and features of the claimed invention with the exception of:

heating means comprising chemical mixing.

Khalil et al. '933 disclose a process for controlling the formation of gas hydrates in subsea pipelines wherein a solution of nitrogen salts is used to generate heat (col. 5, lines 7-21).

It would have been obvious to one of ordinary skill in the art of heating at the time of invention to use chemical mixing. The motivation would have been to use a heat generating means requiring relatively less equipment and labor to sustain than other forms of energy.

*Allowable Subject Matter*

9. Claims 1 through 6 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, set forth in this Office action.

10. Claims 11, 12, 18, 19, 27, and 28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Art Unit: 3673

11. Claims 33 through 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

*Comments*

13. With respect to claims 11, 12, 18, 19, 24 through 28, and 33 through 38, Applicant is advised to positively recite the method steps for which patent protection is being sought. For example, claim 11 might by amended to recite --...further comprising the step of moving a circulation chamber along the subsea pipeline while circulating said seawater...--. For example, claim 25 might be amended to recite --...wherein the step of converting energy includes generating heat by...--.

*Conclusion*

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 3673

Williams et al. (U.S. Patent No. 4,157,847) teaches the use of heated water for mining subterranean sulphur.

Dismukes (U.S. Patent No. 4,523,644) and Klinger (U.S. Patent No. 4,641,710) both teach the use of heat for recovering oil.

Goncalves (U.S. Patent No. 5,182,792) discloses a process for electricall heating pipelines wherein a heating element is inserted into the pipelines.

Wahle et al. (U.S. Patent No. 5,803,161) shows a heat exchanger for a subsea pipeline.

Bass et al. (U.S. Patent No. 6,142,707) disclose direct electric pipeline heating apparatus.

Art Unit: 3673

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tara L. Mayo whose telephone number is (703) 305-3019. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Dunn Lillis, can be reached on (703) 308-3248. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3597.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.



2 December 2000



EILEEN D. LILLIS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600